

## Small Modular Reactor Development Project

# REGIONAL EVALUATION PROCESS REPORT: DRAFT 1



**Note:** This document is in draft form and will be updated with feedback from the Regional Indigenous and Stakeholder Committees (The Committees) during Workshops #2 and #3.



## GLOSSARY OF TERMS

Term	Definition
Aboriginal rights (engaged in Consultation)	Aboriginal rights encompass the customs, practices and traditions that were an integral part of the distinctive cultures of these communities prior to their first contact with Europeans and which continue to have this significance in their cultures today. Métis also possess Aboriginal rights. These rights are determined by examining the customs, practices and traditions that were an integral part of the distinctive culture of Métis communities at the date when a European or Canadian government asserted effective control over the area and which continue to have this significance in the culture today. Métis Aboriginal rights to hunt, fish and trap for food exist in some parts of the Province, such as in Northern Saskatchewan.
Duty to Consult	The Crown has a duty to consult, and where appropriate, accommodate Aboriginal peoples when it considers conduct that might adversely impact potential or established Aboriginal or treaty rights.
Greenhouse gases	Gases that have the property of absorbing infrared radiation emitted from the earth. This includes emissions resulting from the combustion of hydrocarbons, such as coal, natural gas and oil. GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride and nitrogen trifluoride.
Indigenous Rightsholders	Holders of established or credibly claimed Aboriginal Rights and Treaty Rights.
Nuclear fission	The splitting atoms into two or more parts. The heat from nuclear fission is used to turn water into steam. The steam is then used to spin a turbine and generator to produce electricity.



Regional Evaluation Process	A community participation activity that uses a committee format to share project information and call on regional stakeholders to provide input to the siting process by identifying information to be considered.
Reactor core	The central portion of a nuclear reactor, where fission takes place.
Siting Process	The process of recommending a site for development. Ensures robust analysis for potential impacts through field, desktop data and other investigations. Sites recommended through the Siting Process must meet the design and licensing requirements for the project.
Small Modular Reactor	A new class of nuclear reactors that are considerably smaller in size and power output than conventional nuclear power reactors, with enhanced safety features. They are scalable and use nuclear fission to produce energy for electricity.
Treaty Rights (engaged in Consultation)	The Treaty right that is most often engaged in connection with the duty to consult is the Treaty right to hunt, fish and trap for food. These rights may be exercised on unoccupied Crown lands and other lands to which First Nations have a right of access for hunting, fishing and trapping throughout the Province. The duty to consult requires consultations with those First Nations whose traditional territories are potentially impacted by a proposed decision.
Uranium	A dense gray radioactive metal used as a fuel in nuclear reactors. Canada is the second largest producer of uranium globally, with northern Saskatchewan having the largest high-grade uranium deposits in the world.
Used nuclear fuel	The used nuclear fuel that is removed from nuclear reactors after it has been used to produce energy.



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## 1. INTRODUCTION

SaskPower, like much of the world, is going through a clean energy transition. Climate change goals and the increasing price on carbon emissions – coupled with changing customer expectations and the rising demand for power in Saskatchewan are the key drivers for SaskPower to explore and develop new clean power sources. SaskPower is developing a diverse mix of low or non-emitting generation sources to deliver reliable, sustainable, and cost-effective power while aggressively reducing greenhouse gas (GHG) emissions. One option being explored is nuclear power from Small Modular Reactors (SMRs). To support SMR planning, we’re completing a Regional Evaluation Process (REP). This process will help to obtain feedback and inform the siting decisions and the potential development of Saskatchewan’s first SMR facility.

## 2. PROJECT OVERVIEW

### 2.1 WHAT ARE SMRS?

SMRs are nuclear reactors that can generate electricity and heat without producing GHGs. Many SMRs are based on existing traditional designs, but are smaller in size and produce smaller amounts of electrical output, and offer enhanced safety features. Any SMRs deployed in Saskatchewan are planning to use uranium from northern Saskatchewan. The uranium will need to go through an enrichment process to create nuclear fuel, which cannot be done in Canada today. Like traditional reactors, they use a process called nuclear fission to generate heat. Once heat is generated, a steam cycle runs a turbine, which converts heat into electricity. This is a similar process to many power options that exist today, including coal-fired power stations and combined cycle natural gas-fired power stations. SMRs have the potential to deliver reliable, zero-emissions electricity available 24 hours a day, seven days a week. See Figure 2-1 “What is an SMR?” infographic for further information.

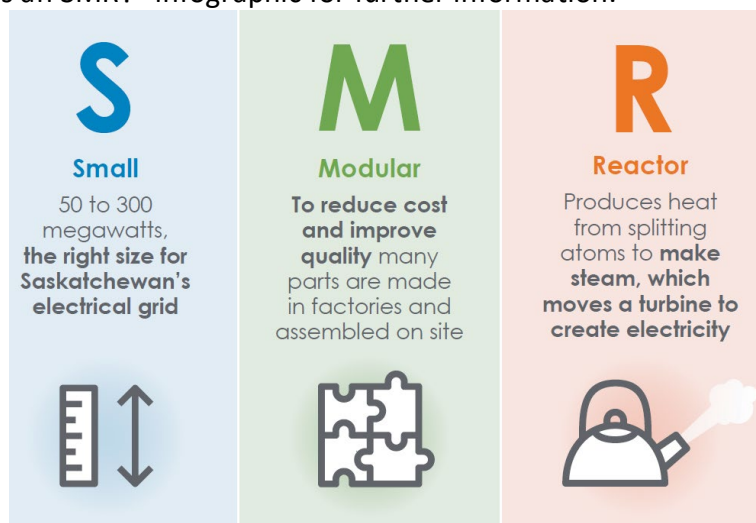


Figure 2-1 What is an SMR



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## 2.2 WHAT WILL AN SMR PROJECT LOOK LIKE?

The proposed project is early in the development phase. A decision on whether to build the first 300 Megawatt (MW) SMR won't be made until 2029 and will be based on the merits of this supply option weighed against others and the provincial demand for electricity. The decision will require extensive project planning, licensing, a federal and provincial impact assessment, public engagement and consultation with Indigenous Rightsholders. If regulatory approvals are granted and a decision is made to proceed with nuclear power using SMR technology, site preparation work may begin on the selected site immediately in 2029. Site preparation will signal the start of the construction phase which is expected to take four to five years. Commercial operation of the first 300 MW SMR could be as early as 2034, with potential expansion to 600 MW by 2037 or earlier. While initial regulatory approvals, including the impact assessment and licence to prepare the site, are planned to be obtained considering the full 600 MW of nuclear power, construction decisions will be made in 300 MW increments.

Based on our current understanding, a site for 600 MW of output (that can accommodate two 300 MW reactors) is expected to require approximately a half section of land (320 acres). SMRs need access to a large body of water like a lake or reservoir that can provide a cooling water supply to the power plant. This is similar to how we operate our coal plants. Cooling water that is borrowed from a lake or reservoir will never come into contact with the reactor core or radioactive areas of the power plant. Specific water requirements continue to be investigated as the project progresses. In addition to a large body of water, the location should be close to existing transmission infrastructure or near areas where we have higher demand for power in the province, amongst additional considerations explained in Section 4 "Siting Process".

The site preparation and construction phase will see increased activity in and around the site. As site preparation starts and throughout the construction and operation phases, access to the site will be restricted to authorized personnel only. Each 300 MW SMR will operate for approximately 60 years. The reactor will then be decommissioned and the site abandoned. All phases of the SMR Project would have oversight from the Canadian Nuclear Safety Commission (CNSC).

During operation, the reactor requires refueling every two years where approximately one third of the fuel is replaced. Used nuclear fuel will be transferred out of the reactor core, first into secure cooling pools and then sealed in dry storage containers which safely contains the radioactive nature of the used nuclear fuel. Sealed dry storage containers are stored on-site until a permanent long-term storage facility is available in Canada. The Nuclear Waste Management Organization (NWMO) is federally legislated and mandated to develop, build and operate long-term storage facilities for all of Canada's used nuclear fuel.



The site will also require resources to support construction and operation activities. Some of these include road upgrades, electricity transmission grid connections, use of rail transportation, and water supply. The location of this infrastructure will remain unknown until project plans are further developed. Figure 2-2 “GE-Hitachi SMR facility rendering” provides a concept of GE Hitachi’s BWRX-300 reactor design which is the technology that SaskPower has chosen to advance our planning work to potentially bring nuclear power to Saskatchewan.



**Figure 2-2 GE-Hitachi SMR facility rendering**

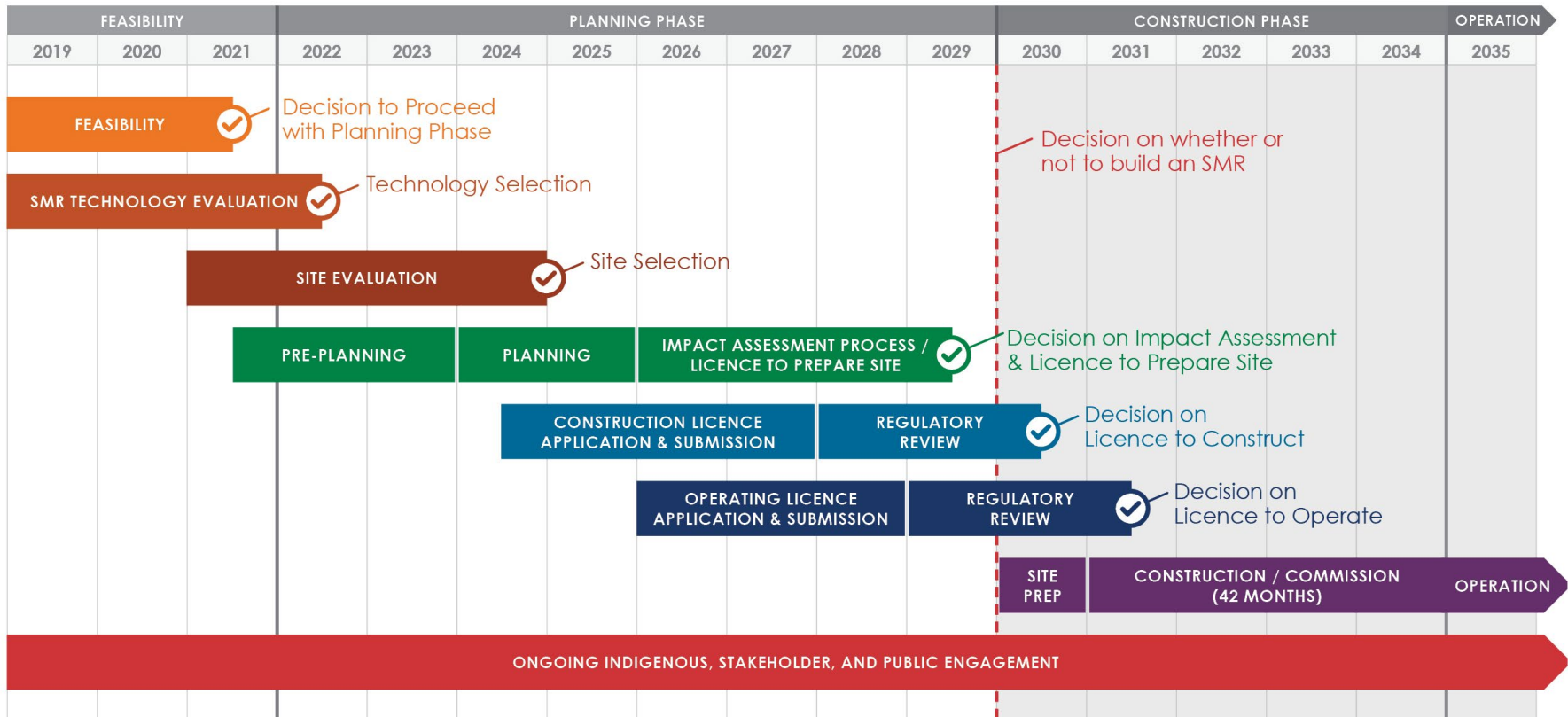
From an economic perspective, the SMR project represents a significant opportunity for Saskatchewan and local communities including job creation and tax revenue. During construction, approximately 1,700 new jobs will be created on site and for companies that supply goods and services. Operation of each 300 MW SMR will create approximately 180 permanent jobs. Companies that support the operation and maintenance of the facility over its 60- year life will also benefit local economy.

SaskPower invites feedback to enhance our understanding of what aspects of project development are of most interest. This will help us to prepare timely materials and share information that is closely aligned with what is considered of most importance.



### 2.3 PROJECT SCHEDULE

The following presents the proposed project schedule as of the date of this report.



Updated: September 2022





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### 3. REGIONAL EVALUATION PROCESS

SaskPower has developed a Regional Evaluation Process (REP) to help inform project development and support engagement for the project. The REP aims to share current information with potentially affected Indigenous, regional, and stakeholder organizations. It will allow SaskPower to gather input on siting considerations, regional identity, potential economic development opportunities and future public participation preferences to support its siting and regulatory approvals processes.

More information on the REP can be found on the [saskpower.com/nuclear](https://saskpower.com/nuclear) webpage.

#### 3.1 REGIONAL EVALUATION PROCESS OBJECTIVES

- 1) Collect available information, input and feedback to help understand and take into consideration the best interests and potential benefits of the study area.
- 2) Share information through a transparent process, where participants and the public can see how feedback was used.
- 3) Provide an opportunity for proactive engagement to ensure that concerns are raised early in the project.
- 4) Help identify possible adverse impacts, issues and concerns.
- 5) Build trust and meaningful long-term relationships within the project's potential communities.
- 6) Use the information obtained through this process to inform regulatory applications/submissions and the siting decision.
- 7) Provide a forum where the perspectives of Indigenous groups, regional and stakeholder organizations can be shared with one another.

#### 3.2 COMMITTEE MEMBERSHIP

As part of the REP, SaskPower has established Regional Indigenous and Stakeholder Committees (Committees) made up of nominated and interested representatives from each study area (Estevan and Elbow). The Committees are meant to strengthen engagement by providing a forum of cross-sector representatives from Indigenous, regional, and stakeholder organizations to share their perspectives.

Committee activities will run in parallel with broader public engagement and Indigenous consultation processes throughout the siting phase. Proximate First Nations and Métis locals will be invited to participate separately in consultations directly with SaskPower to discuss how the proposed SMR siting decision has the potential to adversely impact Treaty and Aboriginal Rights.



More information regarding the role and scope of each of the Committees can be found in the REP Charter on [saskpower.com/nuclear](http://saskpower.com/nuclear). Information regarding Committee workshop dates and meeting locations is provided in Table 3-1.

**Table 3-1: REP Committee Workshop Dates and Locations**

WORKSHOP / DESCRIPTION	ESTEVAN COMMITTEE DATE AND LOCATION	ELBOW COMMITTEE DATE AND LOCATION
Workshop #1: Provide project update; review Committee objectives; affirm REP principles; introduce REP Report: Draft 1	November 22, 2022 Estevan, SK	November 24, 2022 Elbow, SK
Workshop #2: Discuss regional aspirations; provide project siting information; identify topics to be discussed in Workshop #3	December 13, 2022 Estevan, SK	December 15, 2022 Elbow, SK
Workshop #3: Review updated REP Report: Draft 2; Workshop items from Workshop #2	TBD TBD	TBD TBD
Workshop #4: Presentation on the REP Report: Final (overview of key feedback); next steps	TBD TBD	TBD TBD

#### 4. SITING PROCESS

SaskPower began the siting process in 2021 with the identification of criteria or indicators that are important considerations for the successful construction, operation, and eventual closure of an SMR facility. A decision support tool called GoldSET© is being used to help define, map, and evaluate these criteria, which were grouped into three themes:

1. Environmental
2. Social/Cultural
3. Technical

Table 4-1 summarizes the themes and indicators initially applied in the siting process. The full description of all indicators and their source is provided in Appendix A.



**Table 4-1: Project Siting Themes and Criteria**

Theme	Criteria	
Environmental	Protected lands Rare/endangered species Terrestrial wildlife habitat inventory lands Woodland caribou habitat Wetlands Permanent waterbodies Permanent watercourses Aquatic species at risk range Federal critical habitat areas Managed lands	
Social/Cultural	First Nations Reserves Urban municipal areas Future urban development Heritage sensitivity Department of National Defence military lands Proximity to workforce Population density International border	
Technical	Aerodrome airspace Airspace - advisory Airspace - restricted Managed dams Drought potential Existing power plants Faults Fire hazard Gas storage Highways - primary Highways - secondary Major facilities Mining	O&G wells and facilities Pipelines high pressure Pipelines water Railways SaskPower lands Seismic hazard Severe precipitation Switching stations Surficial geology Tornado potential Transmission grid Water sources Water wells



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Using these indicators, two study areas were proposed: Estevan and Elbow, as shown in Figures 4-1 and 4-2 below.

Each study area includes a siting area where the physical SMR will be located somewhere within. The extent of each of the siting areas is a 10 km radius around each water body, including Rafferty and Boundary Dam Reservoirs, Grant Devine Lake and the Gordon McKenzie Arm and Thompson Arm of Lake Diefenbaker. Federal regulations for projects of this nature require a much larger area than the siting area itself be studied.

In this case, study areas were first identified by extending a 30 km radius from the siting area. Figures showing results for some of the environmental and social/cultural indicators within each regional study area are provided in Figures 4-1 and Figure 4-2.

**We need feedback on if the study area boundaries should be adjusted and on environmental and social indicators. See Appendix B for information that outlines the activity you should complete.**

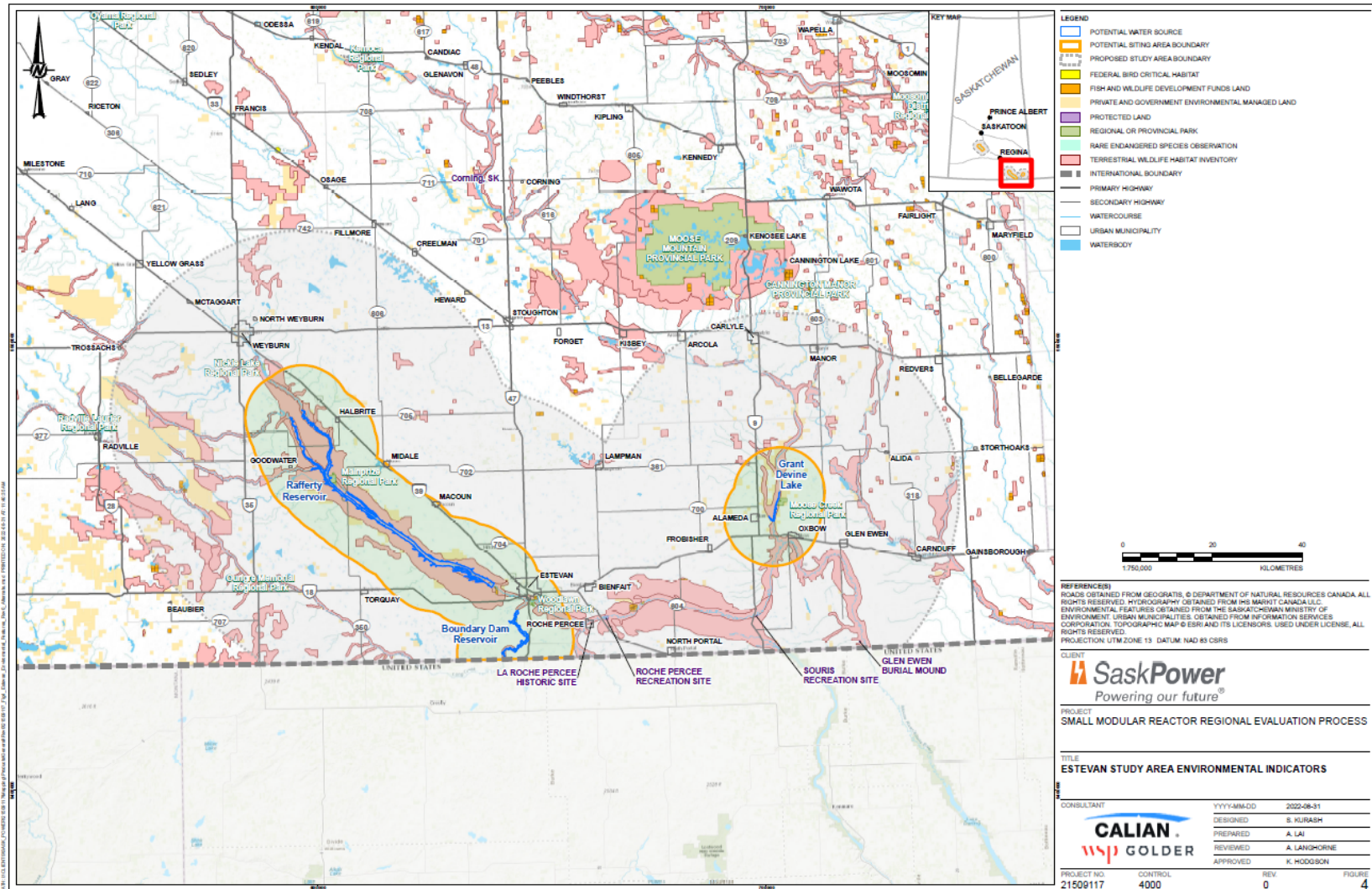


Figure 4-1: Estevan Study Area – Mapping Results of Environmental Indicators

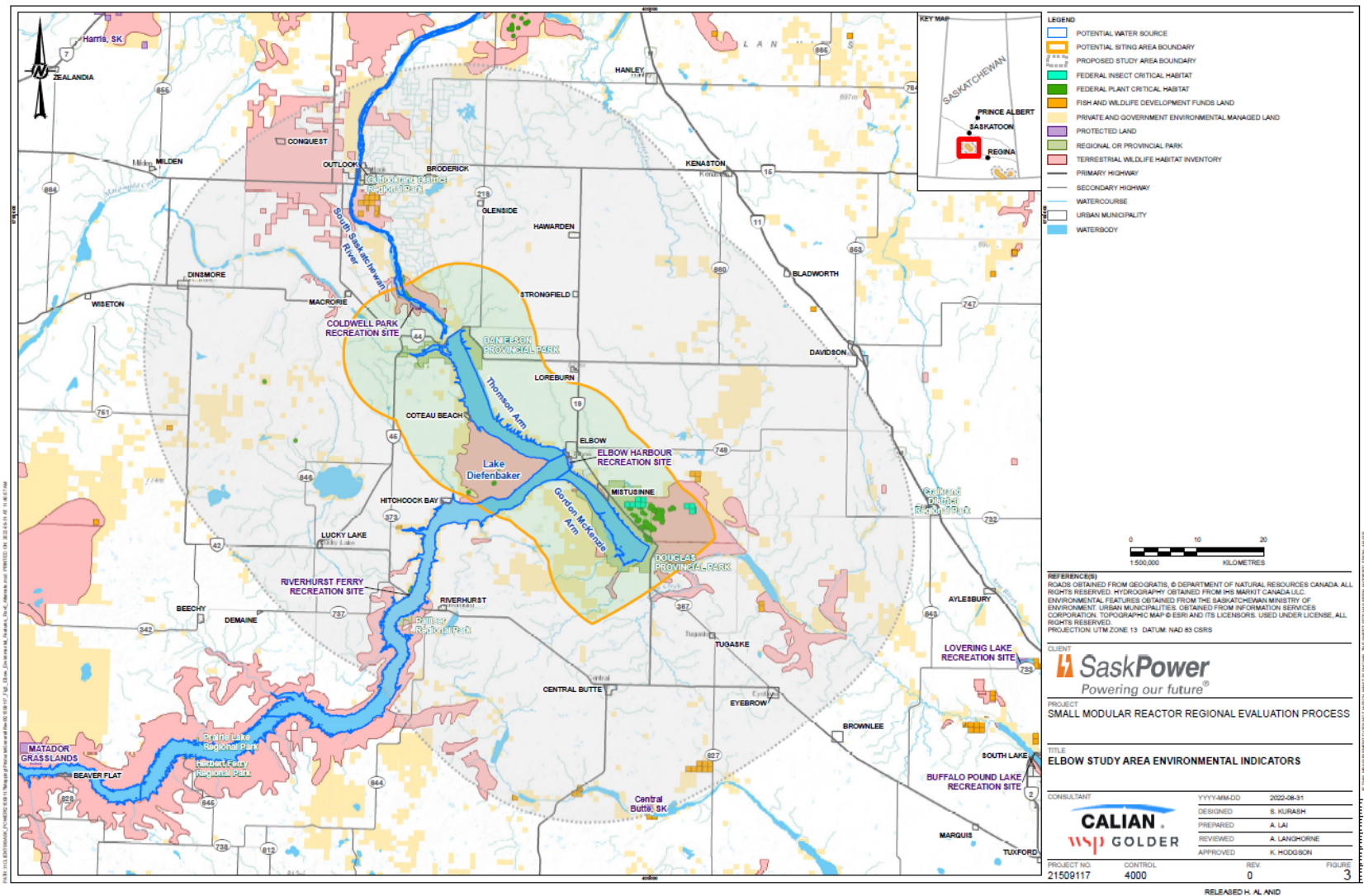


Figure 4-2: Elbow Study Area – Mapping Results for Environmental Indicators



#### 4.1 SOCIAL AND TECHNICAL STUDIES TO SUPPORT SITE SELECTION - WATER VALUATION

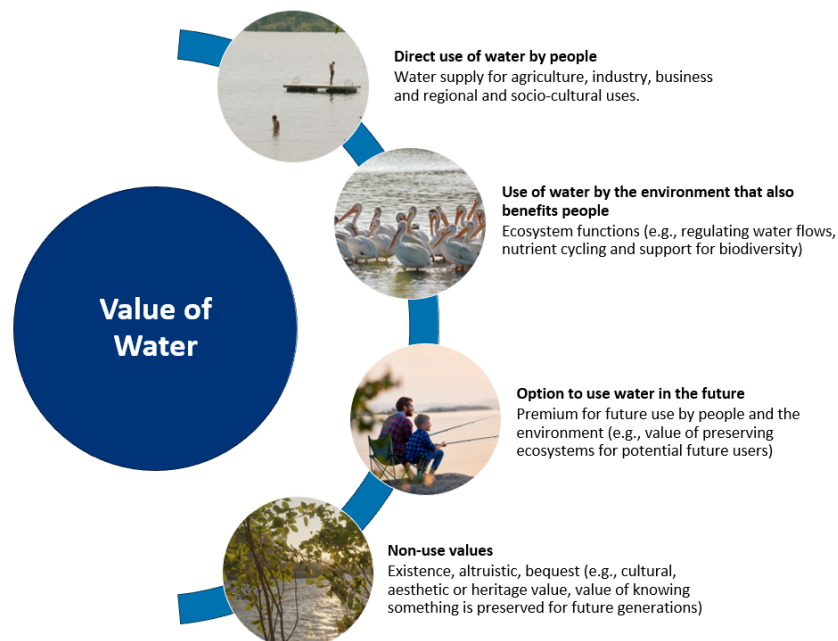
To further inform the selection of a suitable site, SaskPower is doing additional technical studies that will provide supplemental information on key aspects. This includes investigating the biodiversity and water resources that may be present within each study area.

**What do you want to know about our technical studies? See Appendix B for information that outlines the activity you should complete.**

A water valuation study is currently in development which will document the environmental, economic, and socio-cultural values of water within each study area. This study seeks to understand and describe the different values that people place on water resources, and how these may be impacted by the project. Examples include the use of water for:

- Irrigation and agriculture
- Municipal and domestic water supply
- Industrial water use in the mining, oil and gas and power sectors
- Commercial recreation and tourism users
- Social, cultural and spiritual values of water by Indigenous peoples
- Ecosystem services supporting and regulating functions that in turn provide value to other water users by regulating water flows or purifying water.

These water values are illustrated below.





To support the analysis, this study is collecting information from many sources, including:

- Broad public and Indigenous engagement, including:
  - In-person events
  - Online engagement
  - Location mapping tools
  - Surveys
- The Duty to Consult process
- The Regional Evaluation Process,
- Other technical, physical and biological and socioeconomic studies for the SMR Development Project

The water valuation study will use an economic model to estimate the perceived value of water within the study areas, and how these could change in the future. This analysis will be refined as we gather anecdotal information, empirical data, and oral shared history about the value of water from our project stakeholders that will deepen our understanding of the importance of water resources in each area. Water valuation in addition to other technical studies will be conducted to support site selection and to help make decisions on how the project uses or interacts with the waterbody.

**Committee members will take part in a water valuation survey during workshop #2.**

## **5. CONSIDERATION FOR POTENTIAL IMPACTS TO TREATY AND ABORIGINAL RIGHTS**

The early siting decisions for the project has the potential to adversely impact Treaty and Aboriginal rights, and accordingly, SaskPower has a duty to consult and accommodate potentially impacted First Nations and Métis communities. This consultation will focus on how rights are exercised in the study areas so that project siting decisions can avoid or mitigate any potential adverse impacts.

We have contacted First Nations and Métis locals who are located near or are known to exercise rights in and around the study areas. For more information, visit our [Duty to Consult and Accommodate webpage](#).

**We need feedback from Indigenous communities and organizations on areas of importance within the study areas. See Appendix B for information that outlines the activity you should complete.**





## 6. REGIONAL IDENTITY

Through the REP, SaskPower hopes to refine our understanding of the regional identity of each study area. This includes key attributes, interests and priorities held by each committee member, now and for future development planning. The following information has been compiled from publicly available data sources and will be supplemented by the information and input provided by the Committees.

**We need feedback on describing the regional identity. See Appendix B for information that outlines the activity you should complete.**

### 6.1 ESTEVAN STUDY AREA

#### 6.1.1 MUNICIPAL SETTING

The Estevan Study Area, located near the City of Estevan, includes 19 rural municipalities, 24 urban municipalities (Table 6-1), and two planning districts (Weyburn Planning District and Enniskillen and Oxbow Planning District) in southeastern Saskatchewan (Figure 6-1).

The City of Estevan is the largest urban centre in the Estevan Study Area, with a population of 11,483 (Statistics Canada). The city is approximately 200 km southeast of Regina and is surrounded by the Rural Municipality (RM) of Estevan No. 5. The second largest urban centre in the study area is the City of Weyburn, with a population of 11,019 (Statistics Canada), located approximately 86 km northwest of Estevan (Figure 6-1).

**Table 6-1: Estevan Study Area Urban and Rural Municipal Setting**

Rural Municipalities		
Weyburn No. 67	Tecumseh No. 65	Souris Valley No. 7
Brokenshell No. 68	Brock No. 64	Estevan No. 5
Wellington No. 97	Browning No. 34	Griffin No. 66
Lomond No. 37	Coalfields No. 4	Enniskillen No. 3
Cymri No. 36	Moose Mountain No. 63	Reciprocity No. 32
Benson No. 35	Moose Creek No. 33	Mount Pleasant No. 2
Cambria No. 6		



Urban Municipalities		
City of Estevan	Town of Arcola	Town of Carlyle
City of Weyburn,	Town of Carlyle	Town of Oxbow
Town of Midale	Village of Goodwater	Town of Alameda
Village of Torquay	Village of Macoun	Town of Carnduff
Town of Stoughton	Village of Halbrite	Village of Frobisher
The Village of Kisbey	Village of North Portal	Village of Alida
Town of Lampman	Village of McTaggart	Village of Manor
Town of Bienfait	Village of Glen Ewen	Village of Roche Percee

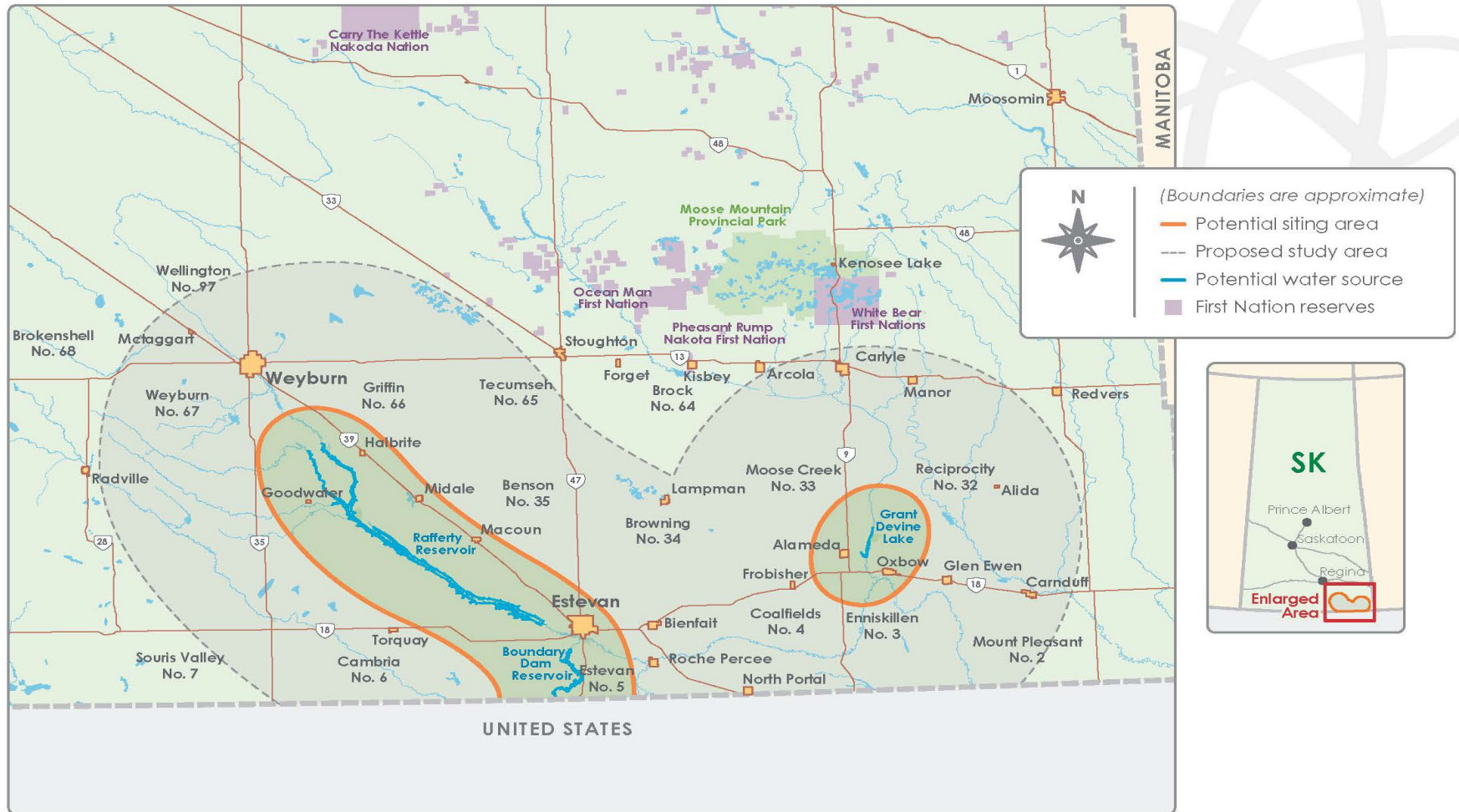
\*Excludes unincorporated hamlets

### 6.1.2 ECONOMY

Estevan’s location 159 km north of North Dakota, USA has made the City and RM a network hub. It includes an intersection of three major highways, the Canadian Pacific Railway (CPR) and the Soo Line Railroad (SOO) to support the cross-border shipment of grains and petroleum products.

The Estevan region is a major energy hub for Saskatchewan. Over 20% of the electrical energy produced in Saskatchewan is generated by two coal-fired generating stations located in this region. Two coal mines supply these facilities. A carbon capture and storage (CCS) development at the Boundary Dam Power Plant was constructed by SaskPower in 2014. Other major industries in the area include the petroleum industry and agri-business.

The Estevan energy hub makes this area an attractive prospect for further industrial development that could leverage and diversify existing businesses and economic activity with the potential SMR technology.



**Figure 6-1: Estevan Study Area**



Future planning initiatives identified by the City of Estevan's 2019 Official Community Plan (OCP) have identified several economic challenges, including uncertainty in the resource sector and reduced energy production at Boundary Dam. These have adversely affected investment and economic development in the area (City of Estevan, 2019).

The city prioritizes ensuring industrial land is available and supports the development of renewable energy infrastructure such as solar energy and biomass. Development in this regional area will need to be mindful of balancing industrial development while preserving significant environmental features (e.g., Pleasantdale Valley and the Souris River Valley). Considering regional climate change adaptation and resilience strategies, and maintaining recreational opportunities for residents through open spaces and parks (City of Estevan, 2019) will also need to be kept in mind.

### 6.1.3 EMPLOYMENT

Employment statistics reflect the economic drivers in this region. As of 2016, (including census data from Coalfields RM, Estevan, Estevan RM, Bienfait and Roche Percee), employment is dominated (17%) by the natural resource extractive sector (Mining, Quarrying and Gas). This is closely followed by the Public Sector (16.8%), Construction (9.7%), Utilities (6.0%), Agriculture (4.6%), and Manufacturing (4.3%) (Statistics Canada, 2017).

Understanding the existing labour workforce and capacity coupled with planning for future development scenarios will be key to identifying the investment needed to create the necessary education pathways and skills training programs to support regional growth.

**We want your feedback on investment needed to support growth in this region. See Appendix B for information that outlines the activity you should complete.**

### 6.1.4 ENVIRONMENTAL CONSIDERATIONS

The City of Estevan's Official Community Plan (OCP) identifies natural features within the city that are environmentally sensitive, including:

- The Souris River floodplain
- An unnamed watercourse that flows through Pleasantdale Valley and into the Souris River
- Significant slope areas along the Souris River Valley, Pleasantdale Valley, the ravine south of Highway 39 and west of Alice Road
- Six abandoned coal mines (City of Estevan, 2019)

The City also notes key environmental hazards including wildfires, extreme heat and cold, droughts and flooding which is a key risk within the Souris River Basin as a result of climate change (Saskatchewan Research Council, 2016) (International Institute for Sustainable Development., 2016).



Two provincial parks are located within or near the Study Area. Moose Mountain is classified as a Natural Environment Park, which is intended for use as an outdoor recreational area, consistent with the protection of natural landscapes. Cannington Manor is classified as a historic park to preserve prehistoric and historic resources.

There are also four regional parks, as shown in Figure 4-1:

- Woodlawn Regional Park – Boundary Dam
- Nickle Lake Regional Park
- Mainprize Regional Park
- Moose Creek Regional Park

Prairie National Wildlife Area (Unit Number 27) is also a Protected Area within the Estevan Study Area at Corning, Saskatchewan.

**We want to understand what species or environmental components are important to you. See Appendix B for information that outlines the activity you should complete.**

## 6.2 ELBOW STUDY AREA

### 6.2.1 MUNICIPAL SETTING

The Elbow Study Area is located near the Lake Diefenbaker Reservoir in central Saskatchewan (Figure 6-2) and includes 19 rural municipalities, 18 urban municipalities (see Table 6-2) and the WaterWolf Planning District.

The Town of Outlook is the largest urban centre in the Elbow Study Area, with a population of 2,279. The town is approximately 110 km south of Saskatoon and is surrounded by the RM of Rudy No. 284. The second largest urban center in the Elbow Study area is the Town of Central Butte (Figure 6-2) with a population of 416, located approximately 97 km northwest of Moose Jaw, SK.

**Table 6-2: Elbow Study Area Urban and Rural Municipal Setting\***

Rural Municipalities		
Rosedale No. 283	Willner No. 253	Eyebrow No. 193
Huron No. 223	Rudy No. 284	Enfield No. 194
Canaan No. 225	Milden No. 286	Arm River No. 252
Maple Bush No. 224	McCraney No. 282	Craik No. 222
Loreburn No. 254	Montrose No. 315	Marquis No. 191
Coteau No. 255	King George No. 256	Morse No. 165
Fertile Valley No. 285	Victory No. 226	



Urban Municipalities		
Town of Outlook	Village of Dinsmore	Village of Tugaske
Town of Central Butte	Village of Conquest	Village of Eyebrow
Village of Elbow	Village of Macrorie	Village of Riverhurst
Village of Loreburn	Village of Broderick	Village of Brownlee
Village of Strongfield	Village of Glenside	Resort Village of Mistusinne
Village of Hawarden	Village of Lucky Lake	Resort Village of Coteau Beach

\*does not include unincorporated hamlets

## 6.2.2: ECONOMY

The Town of Outlook, is home to the largest irrigation project in the province (Lake Diefenbaker Irrigation Project; refer to Figure 5-2) and is often referred to as the “Irrigation Capital of Saskatchewan” (Town of Outlook, 2021). It is part of the South Saskatchewan River Irrigation District (SSRID) No. 1, containing 44,327 irrigated acres that are supplied from Lake Diefenbaker (South Saskatchewan River Irrigation District, 2021). Historically, industrial developments in or near Outlook have often been irrigation, agriculture-related, recycling or construction businesses. However, the town has expressed an interest to shift from agriculture to technology to diversify their economy (Town of Outlook, 2014).

The WaterWolf Planning District (WWPD), inclusive of the Town of Outlook and Village of Elbow, developed a Growth Management Plan 2025. Outlook and Elbow have since developed their own official community plan (OCPs) that are consistent with the plan. The general interests in economic growth include promoting a range of different opportunities like tourism, recreation and commercial, industrial and institutional developments (WaterWolf Planning District, 2013).

Industrial developments near the area include the Gardiner Dam located 25 km downstream of Elbow and a lagoon facility to treat local sewage and wastewater owned by the village.

Due to Outlook and Elbows’ proximity to Lake Diefenbaker and the various provincial and regional parks, tourism is a major economic sector. According to the Lake Diefenbaker Tourism Destination Area Plan (2008), air and water quality are critical aspects supporting tourism. The Saskatchewan Ministry of Parks, Culture, and Sport have expressed their interest in continuing to expand future recreational planning (e.g., water sports, camping sites, tourism, cottage subdivisions) (Ministry of Parks, Culture and Sport, 2012). Currently, the primary recreational water-based activities in Lake Diefenbaker are:

- boating
- sailing
- fishing
- swimming
- beach access



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- non-motorized water sports (e.g., canoe, kayak, wind surfing) (Ministry of Parks, Culture and Sport, 2012).

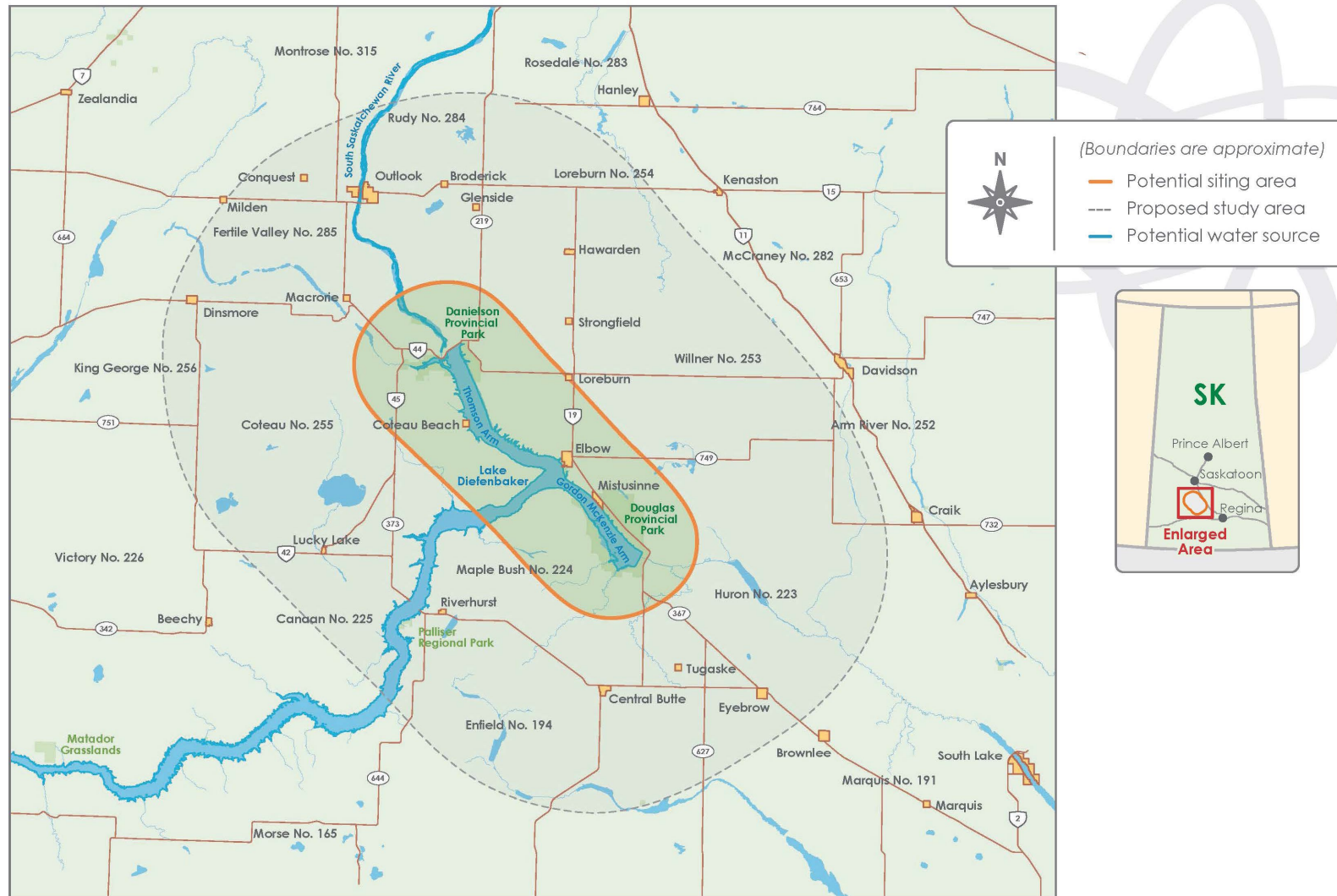


Figure 6-2: Elbow Study Area





### 6.2.3: EMPLOYMENT

In Elbow, as of 2016, employment was predominately in the Agriculture, Forestry, Fishing, and Hunting sectors (21.4%). This is followed by Manufacturing (17.9%), and Construction (14.3%). In Outlook, employment was predominately in the Health Care and Social Services sector (15.5%), followed by the Retail Trade sector (14%), Educational Services sector (12.5%) and Agriculture, Forestry, Fishing and Hunting sector (11%). (Statistics Canada)

**We want your feedback on investment needed to support growth in this region. See Appendix B for information that outlines the activity you should complete.**

### 6.2.4 ENVIRONMENTAL CONSIDERATIONS

The Town of Outlook is located on the banks of the South Saskatchewan River within RM Rudy No. 284, in the northwest region of the study area. The Village of Elbow is situated on Lake Diefenbaker Reservoir, more centrally located within the Elbow Study Area.

Lake Diefenbaker Reservoir (Lake Diefenbaker) is part of the South Saskatchewan River system and is the largest waterbody in southern Saskatchewan. It is a critical water resource that provides water services (e.g., drinking water, irrigation, industrial use) and holds recreational and aesthetic value.

According to the Village of Elbow's OCP Land Use Concept Map (2008), future residential development in Elbow has been zoned near the lakefront and future commercial and industrial development has been zoned to maximize the separation from residential areas and environmentally sensitive areas (e.g., Lake Diefenbaker shoreline) (Village of Elbow, 2008).

Within or near the study area there are two provincial parks, Danielson Provincial Park and Douglas Provincial Park. There are also six regional parks:

- Outlook and District Regional Park
- Palliser Regional Park
- Prairie Lake Regional Park
- Herbert Ferry Regional Park
- Cabri Regional Park

A multi-use recreational facility is also planned to be constructed in the village to accommodate the growing population. Residents place a high value on recreational activities at Lake Diefenbaker, Douglas Provincial Park and Elbow Harbour Provincial Recreation Site.



**We want to understand what species or environmental components are important to you. See Appendix B for information that outlines the activity you should complete.**

## 7 PRELIMINARY INTERESTS

The following table presents preliminary topics that have been identified through various sources as being of potential interest to the Committee. Information sources reviewed included findings, presentations, and reports from ongoing siting and community engagement activities. They also include publicly available information accessed online, such as community plans and other reports potentially relevant to the project. This section of the report is intended to be updated and refined as the REP progresses.

**We need feedback on your areas of interest around project development. See Appendix B for information that outlines the activity you should complete.**

Category	Topic of Interest
Nuclear Waste	<ul style="list-style-type: none"> <li>• Nuclear waste management including storage method, location, quantities, type and long-term viability.</li> <li>• Nuclear waste transportation safety</li> </ul>
Human Health	<ul style="list-style-type: none"> <li>• Radiological hazards to human health and the environment</li> <li>• Radiological accidents</li> <li>• Realities of living near a nuclear facility</li> </ul>
Accidents/ Malfunctions	<ul style="list-style-type: none"> <li>• Potential for accidents and malfunctions</li> <li>• Transparency regarding worst case scenario</li> <li>• Historic perceptions of nuclear accidents</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Cost of SMR technology development and decision making timelines (e.g., regulatory process)</li> <li>• Business partnerships with Indigenous groups</li> <li>• Transition of current energy work force to nuclear industry</li> <li>• Employment opportunities, resources and partnerships (e.g., training programs, classes) to develop a local workforce</li> <li>• Cost of electricity produced from an SMR</li> <li>• Adverse effects to agriculture and loss of agricultural land</li> </ul>
Engagement	<ul style="list-style-type: none"> <li>• Meaningful engagement and voices are being heard</li> <li>• Authentic on where the public can have influence</li> <li>• Transparent communication and opportunity to provide feedback</li> <li>• Caution engagement fatigue</li> <li>• Focus on Indigenous audience in addition to general public</li> </ul>



Category	Topic of Interest
Technology	<ul style="list-style-type: none"> <li>• Timelines for SMR Project development and deployment</li> <li>• Opportunities to retrofit existing coal power plants for SMR development</li> <li>• Fuel type, source (e.g., whether uranium deposits from Saskatchewan will be considered) and associated supply chain</li> <li>• Amount and efficiency of electricity produced by SMR technology</li> <li>• Applications other than power generation (e.g., medical isotopes).</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Risk of extreme weather events due to climate change (e.g., flooding)</li> <li>• Effects to air quality, water quality and water consumption</li> <li>• Upstream emissions from uranium mining operations</li> <li>• Mitigation for potential impacts on aquatic resources, wildlife habitat, protected areas, and species at risk</li> <li>• Natural resource use, including traditional land use by Indigenous Rightsholders, commercial and recreational use</li> </ul>
Cultural Heritage	<ul style="list-style-type: none"> <li>• Mitigation for potential impacts on:               <ul style="list-style-type: none"> <li>• Archaeological sites</li> <li>• Spiritual sites</li> <li>• Paleontological sites</li> </ul> </li> </ul>
Social	<ul style="list-style-type: none"> <li>• Pressure on existing community services</li> <li>• Pressure on existing infrastructure (roads, emergency services etc.)</li> </ul>

## 8 PUBLIC PARTICIPATION ACTIVITIES

As SaskPower continues the development of the project we want to better understand how community members in each study area would like to participate in future public participation activities. These will be discussed with each Committee and could include, but not be limited to the following:

- Virtual and/or in-person workshops
- Surveys (online and/or phone)
- Community dialogue
- Forums
- Information mail /outs
- Virtual and/or in person open houses
- Technical study input
- Mitigation planning



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## 9 SUMMARY OF WORKSHOPS AND NEXT STEPS

The Committees will be established by November 2022, and this preliminary report will be circulated to all proposed members during Workshop #1. The content of this report will be discussed at Workshop #2, and both written and verbal feedback is expected at the workshop and in written comments submitted following the workshop.

Priority topics for future discussion will be established with each Committee at the subsequent workshops and documented in this section.



## 10 ACRONYMS

CCS	Carbon capture and storage
CNSC	Canadian Nuclear Safety Commission
CPCAD	The Canadian Protected and Conserved Areas Database
CPR	Canadian Pacific Railway
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
GHG	Greenhouse Gases
ISC	Information Services Corporation
MW	Megawatt
NRCAN	Natural Resources Canada
OCP	Official Community Plan
REP	Regional Evaluation Process
RM	Rural Municipality
SKCDC	Saskatchewan Conservation Data Centre
SMR	Small Modular Reactor
SOO	Soo Line Railroad
SPSA	Saskatchewan Public Safety Agency
SSRID	South Saskatchewan River Irrigation District
USWA	Upper Souris Watershed Association
WSA	Water Security Agency

## 11 REFERENCES

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## APPENDIX A REGIONAL SITING CRITERIA

Appendix A will be provided at Workshop #2.



## APPENDIX B REP PARTICIPANT ACITIVITY SHEET

Provide us your feedback by filling out the information below.

What study area are you supplying information for?

Estevan  Elbow

*Note: if you are responding to both please fill out one form per study area.*

### Section 4.0 Siting Process

The boundaries of each study area can be adjusted or further refined based on feedback received through the Regional Evaluation Process (REP). Do you feel the boundaries of the study area need to be adjusted? If so, describe how?

Do you feel we should refine the existing indicators? If so, explain how and why?

Are we missing any siting indicators from an environmental or social perspective? If so, list and provide a source of information, if available.

What information do you want to know about SaskPower's technical studies described in Section 4.0?





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## Section 5.0 Considerations for potential impacts to Treaty and Aboriginal Rights

Do you know of any areas of importance to Indigenous communities and organizations within the study areas? If yes, list any comments or suggestions.

*Note: be sure to double check which study area you have chosen to make your selection about.*

## 6.0 Regional Identity

Have we missed any important aspects in our description of the municipal setting or economy of the study area? What else should be included? Where do you suggest we get that information?

What do you feel the future looks like in the study area?

What jobs and economic opportunities best align with your regional interests?



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What investment do you feel is needed to support growth in this region?

SaskPower is committed to reducing our impact and protecting the environment. What species or environmental components are important to you?

How are natural resources used in this region?

What is there in the area that are of environmental and/or cultural importance?

### **Section 7.0 Preliminary Interests**

What are the top five aspects of the project development are you most interested in? Feel free to list more than five if you have them. See table in section 7.0 for ideas.